

IN VITRO CULTURE OF AQUATIC PLANT
Aglaonema simplex

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KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA
2004

1100030779

PERPUSTAKAAN KOLEJ UNIVERSITI SAINS & TEKNOLOGI MALAYSIA (KUSTEM)			
Pengarang Wardah bt Mond Paudar		No. Panggilan LP 26 FST 16 2004	
Judul In vitro culture of gacah plant			
Tarikh	Waktu Pemulangan	Nombor Ahli	Tanda tangan
16/8/05	3-00 pm	8108107523	Q.
24/7/06	4-00 pm	UK10532	m.
8/8/06	1-20 pts	UK10504	X
12/8/06	2-00 pm	UK10532	h.
13/8/06	7-00 AM	UK10532	
14/8/06	2-00 p.m	UK105	
	4-00 AM		

***IN VITRO* CULTURE OF AQUATIC PLANT
*Aglaonema simplex***

By

Wardah bt. Mohd Paudzi

**Research Report submitted in partial fulfilment of
the requirements for the degree of
Bachelor of Science (Biological Sciences)**

**Department of Biological Sciences
Faculty of Science and Technology
KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA
2004**



**JABATAN SAINS BIOLOGI
 FAKULTI SAINS DAN TEKNOLOGI
 KOLEJ UNIVERSITI SAINS DAN TEKNOLOGI MALAYSIA**

**PENGAKUAN DAN PENGESAHAN LAPORAN
 PROJEK PENYELIDIKAN I DAN II**

Adalah ini diakui dan disahkan bahawa laporan penyelidikan bertajuk:

In vitro culture of aquatic plant *Aglaonema simplex*

oleh Wardah Binti Mohd Paudzi, No. Matrik UK 5642

telah diperiksa dan semua pembetulan yang disarankan telah dilakukan. Laporan ini dikemukakan kepada Jabatan Sains Biologi sebagai memenuhi sebahagian daripada keperluan memperoleh Ijazah Sarjana Muda Sains – Sains Biologi, Fakulti Sains dan Teknologi, Kolej Universiti Sains dan Teknologi Malaysia.

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ACKNOWLEDGEMENT

First of all, Alhamdulillah, thank God for giving me strength to complete all my work on time. I would like to thank Dr. Aziz Bin Ahmad for helping me doing my project and also being such a great supervisor to me. Thank you also to my parents and to all my family for all the support and encouragement.

Thank also due to Abas, Kak Rokiah, Abang Syed, Chien, Chals, Nisha, Sya and Nyamuk for helping me at Biotech Lab. Last but not least, to my special friend, Yusz, thanks for all your patience and support.

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LIST OF SYMBOLS

mg/L	-	Milligram per liter
BAP	-	Benzylaminopurine
Kin	-	Kinetin
2iP	-	2-Isopentyladenine
HCl	-	Hydrochloric acid
NaOH	-	Natrium hydrochloride
M	-	Molar
v/w	-	Volume per weight
v/v	-	Volume per volume

ABSTRACT

An aquatic plant, *Aglaonema simplex* has been successfully cultured in – vitro using shoot tip in MS medium containing 1.0 mg/L of BAP. The optimum sterilization condition was by using 100% (v/v) of Clorox with 30 minutes of immersion time. The effect of media (MS medium, B5 medium and AS medium) and cytokinin (BAP, Kinetin and 2iP) were examined. The best growth was obtained in MS medium containing 5.0 mg/L of BAP. Three types of explants, which were complete plantlet, shoot in longitudinal section and shoot in cross section were used for induction of shoot proliferation. The highest number of shoot proliferation was obtained using longitudinal section, which cultured in MS medium containing 5.0 mg/L of BAP.

ABSTRAK

Kultur in – vitro tumbuhan akuatik, *Aglaonema simplex* telah berjaya dihasilkan dengan menggunakan pucuk dan dikultur di dalam media MS yang mengandungi 1.0 mg/L BAP. Kadar pensterilan yang optimum didapati dengan menggunakan 100% (v/v) Klorox, direndam selama 30 minit. Kesan media (MS, B5 dan AS) dan sitokinin (BAP, Kinetin dan 2iP) telah dikaji. Pertumbuhan pokok yang terbaik didapati di dalam media MS yang mengandungi 5.0 mg/L BAP. Tiga jenis eksplan iaitu pokok yang sempurna, pucuk pada keratan memanjang dan pucuk pada keratan melintang digunakan untuk mengaruh pertumbuhan pucuk yang baru. Bilangan pucuk yang tertinggi didapati dengan menggunakan pucuk pada keratan memanjang yang dikultur di dalam media MS yang mengandungi 5.0 mg/L BAP.